Product Safety Information

DPM 4 1 69

FYRQUEL® 220

Fire Resistant Hydraulic Fluid

This Product Safety Information Sheet is principally directed to managerial, safety, hygiene and medical personnel. The description of physical, chemical and toxicological properties and handling advice is based on experimental results and past experience. It is intended as a starting point for the development of health and safety procedures.

I. PHYSICAL AND CHEMICAL PROPERTIES

Composition: Butylated triphenyl phosphate ester. This product contains triphenyl phosphate (15-20%), CAS Registry Number: 115-86-6
Physical State/Description: Clear transparent liquid
Decomposition Temperature: Greater than 665°F (352°C)
Flash Point: 475°F (246°C) Pensky Marten Closed Cup
Miscibility: Less than 0.1 g/100 mL in water
Odor: Essentially none
Pour Point: 0°F (-18°C)
Vapor Pressure: Less than 0.1 mmHg at 100°F (37.8°C)
Viscosity: 208-230 SUS at 100°F (37.8°C)

II. CHEMICAL REACTIVITY

Hydrolyzes slowly at ambient temperatures when exposed to wet alkaline or acidic conditions. Also hydrolyzes at temperatures of 150°F (66°C) or greater when exposed to atmospheric moisture. Upon hydrolysis, phenol, substituted phenols and aryl phosphoric acids are formed.

III. STABILITY

Stable at temperatures below 150°F (66°C) and atmospheric pressure. In the absence of moisture, it is stable to much higher temperatures.

IV. FIRE HAZARD

Under fire conditions, may support combustion and decompose to give off toxic materials such as phosphoric oxides. However, the product is self-extinguishing once the source of ignition is removed.

IN CASE OF SUSPECTED POISONING, REFER TO THE PROCEDURE AND EMERGENCY CONTACTS IN SECTION VII: FIRST AID.

IN CASE OF SPILLAGE, REFER TO THE PROCEDURE AND EMERGENCY CONTACTS IN SECTION IX: SPILL HANDLING OR CALL CHEMTREC (800) 424-9300.

V. FIREFIGHTING TECHNIQUE

Vapors from combustion are irritating to the respiratory tract and may cause breathing difficulty and pulmonary edema. Symptoms may be delayed several hours or longer depending upon the extent of exposure.

As in any fire, prevent human exposure to fire, smoke, fumes, or products of combustion. Evacuate nonessential personnel from the fire area. Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

Use standard firefighting techniques to extinguish fires involving this material—use water spray, dry chemicals, or carbon dioxide.

If not leaking, keep fire-exposed containers cool with a water spray to prevent rupture due to excessive heat. High pressure water hose may spread product from broken containers increasing contamination or fire hazard.

VI. TOXICOLOGY

CAUTION: May cause irritation. May be harmful if swallowed. Avoid contact with eyes, skin and clothing.

Ingestion

The acute oral LD50 is greater than 5,000 mg/kg in both male and female rats. A single dose of 5,000 mg/kg produced a mild to moderate decrease in physical activity, severe diarrhea, stains on fur, and no mortality in male and female rats.

Daily ingestion of 100, 400 or 1,600 ppm in the diet by rats for 3 months produced increases in the absolute and relative mean weights of livers and adrenal glands in females and the livers of males at the 1,600 ppm dose level. Microscopic pathological changes were not observed. No significant biological effect was observed at the 400 ppm dose level.

Daily administration of 100, 400 or 1,000 mg/kg to rats on days 6 through 20 of gestation demonstrated maternal toxicity (increased liver weights and reduced food consumption at the high dose) and feto-toxicity (reduction in fetal body weight at the high dose) but no indications of teratogenicity were observed.

Skin Contact

The acute dermal LD50 is greater than 2,000 mg/kg in rabbits. A single dermal application of 2,000 mg/kg produced a slight decrease in physical activity, mild diarrhea, and 10 percent mortality.

Mild irritant to rabbit skin following a 24-hour exposure period.

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